

CR-109149

P.29

Project Management Authority:  
Some Preliminary Insights

Working Paper No. 5

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NGL 33-022-090

(NASA-CR-109149) PROJECT MANAGEMENT  
AUTHORITY: SOME PRELIMINARY INSIGHTS  
(Syracuse Univ.) 22 p

N90-70652

Unclas  
00/81 0278549

December, 1968

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The research for this paper was supported by a NASA research grant # 1620-6223 to Syracuse University to investigate the "Role of the Project Manager."

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## INTRODUCTION

In an effort to understand the organizational ramifications of project management the objective of this paper is to discuss several divergent concepts and theories centering around project authority. As one of the more recent innovations in management science, prior explanations of the project management concept and especially the authority dimensions and relationships of the project manager have been somewhat vague. A review of the literature on project management suggests that little has been done that presents a viable framework for understanding the nature of authority in different types of project organizations.

To explore some of the current thinking about project authority the paper first discusses the differences between project organization and functional organizations and the differences in authority from the project viewpoint and the "traditional" management viewpoint. The paper then discusses the different degrees of authority usage in four unique models of project organization. The researches of several authors will be used to present the patterns of thought surrounding each of these concepts.

## THE PROJECT MANAGEMENT SYSTEM

Project management received its impetus as a product development methodology from the Department of Defense and NASA. It was employed on tasks that were characterized as being exceedingly complex; on the frontiers of existing technology; and/or where cost and time considerations were critical. Baumgartner discusses some of the trends toward project management as follows:

Several factors are responsible for this trend to project organizations and project management. One is rapid technological advance, which resulted from the exceedingly high demands of government projects in terms of capabilities and reaction time, and which dictates the minimum lead time be consumed in developing a system that is not obsolete (although it may be obsolescent) by the time it becomes operational. Whole new fields of scientific endeavor have opened up, such as cryogenics, nucleonics, oceanography, semi-conductors, and space technology. Another reason for the trend is the change in theories and philosophies of national defense and prestige: the jet-age, nuclear-age, space-age kaleidoscope has produced performance capabilities requiring completely new doctrine for their control. Of interest to everyone's pocketbook is the need to produce project items at minimum expense.<sup>1</sup>

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<sup>1</sup>John S. Baumgartner, Project Management, Homewood: Richard D. Irwin, Inc., 1963, p. 7.

### Traditional Management Concepts

The requirements that these complex tasks placed on organizations greatly influenced the traditional view of mobilizing resources through existing organizational structures. This traditional view of the organization often coincides with the characteristics of the "bureaucratic model" of organizations. From the tenets of the bureaucratic model a normal transition and outgrowth is functionalism. Functionalism finds its basis and rationale in utilizing the unique skills of managers in specialized departments of the organization. Unfortunately, functionalism tends to be somewhat mechanistic in its approach and usually performs most efficiently when rather routine tasks are required. Increasingly, task complexity and its implications to the organization and its participants has been a major factor that has prompted management to audit both the function and structure of their organizations. Such audits have indicated that not only should the organizational structure be modified but also the "traditional" way of viewing the process of management.

The tenants or beliefs of the traditional approach to management, in addition to others, are comprised of the following:

1. Organizations function as an integrated entity on a vertical basis.
2. A strong superior-subordinate relationship is required to preserve unity of command and to ensure unanimity of objective.

3. Individual functional managers are parochial (and rightly so).
4. Functional managers maintain lateral staff coordination to obtain integrated staff action.
5. Organizational groups have a basic dichotomy, viz., line and staff.
6. A scalar chain of authority relationships exists within the organization, ranging from the ultimate authority to the lowest rank, with the line of authority following every link in the chain.
7. An employee should receive orders from one superior only.
8. Work progresses among relatively autonomous functional units of an organization.<sup>2</sup>

As mentioned previously, these tenants delineating how management "should" function, often conflict with the demands that complex tasks require of the organization.

#### The Institutional and Programmatic Organizations

To explore further the distinctions between traditional management and project management, differences also must be noted between the institutional organization and the programmatic organization. The former provides the broad "umbrella" in which the project management concept operates. It is composed of the various "functional" units (specialized departments) within the organization. Also included are the various staff positions supporting the functional areas.

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<sup>2</sup>David I. Cleland and David C. Dellinger, "Changing Patterns in Management Theory," Aerospace Management, Spring, 1966, p. 3.

The programmatic organization encompasses the project manager, his staff, and the necessary interaction patterns between the project manager and the other functional areas within the organization. In essence, it defines the structure by which the project manager will accomplish his tasks. The relationship is shown schematically in Figure I for a "typical" industrial organization. Regardless of the size or complexity of a given project both the institutional and programmatic organizations are always present. However, as we shall explore subsequently, the particular "model" of project management structure that is utilized will delineate the interfacing patterns of the programmatic organization to the institutional organization. Traditional management generally is identified with the functional approach to organizations while project management is identified primarily with the programmatic organization and secondarily within the functional and institutional organization. The distinctions between the institutional organization and the programmatic organization are basic causes for the misinterpretations of project management authority.

In Table I distinctions in several organizational concepts from the project viewpoint and the functional viewpoint are noted.

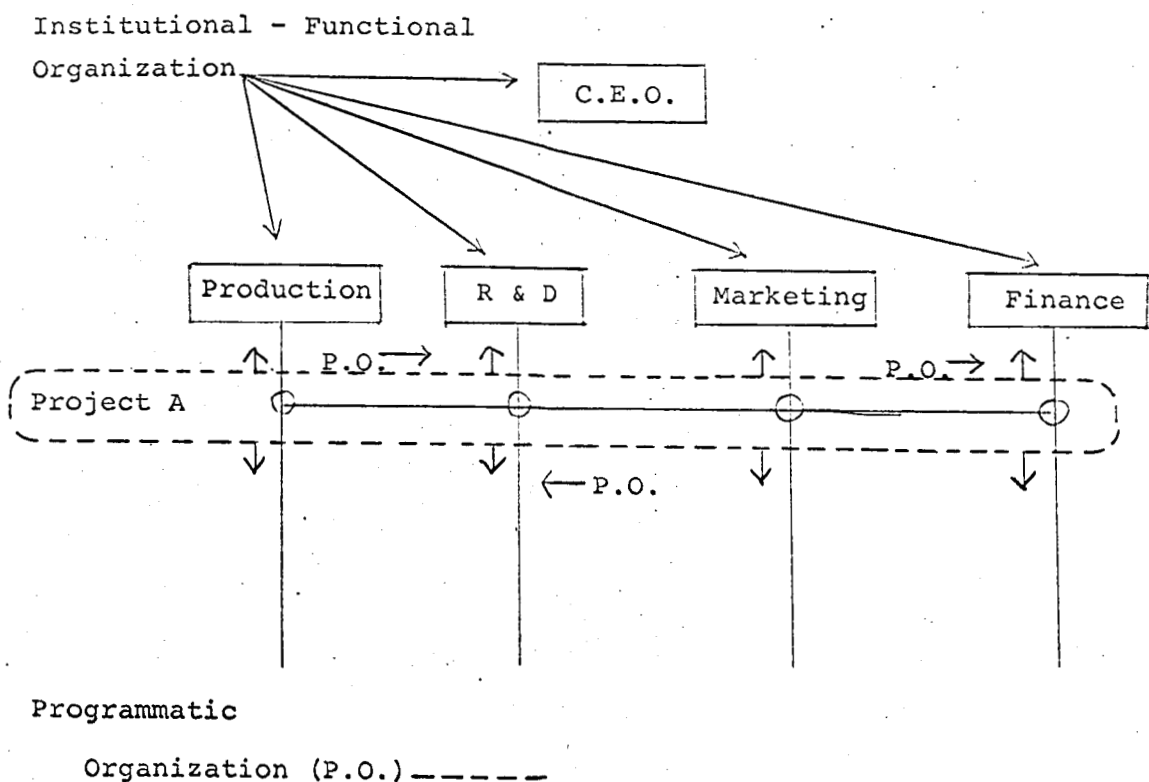


FIGURE I

RELATIONSHIP OF THE INSTITUTIONAL ORGANIZATION AND THE  
PROGRAMMATIC ORGANIZATION. (INDUSTRIAL ORGANIZATION)



Table 1

Comparison of Specific Organizational concepts from the project viewpoint and the Functional viewpoint.

Phenomenon	Project Viewpoint	Functional Viewpoint
Line-Staff organizational Dichotomy	Vestiges of the hierarchial model remain, but line functions are placed in a support position A web of authority and responsibility relationships exist?	Line functions have direct responsibility for accomplishing the objectives; line commands, staff advises.
Scalar Principle	Elements of the vertical chain exist, but prime emphasis is placed on horizontal and diagonal work flow. Important business is conducted as the legitimacy of the task requires.	The chain of authority relationships is from superior to subordinate throughout the organization. Central, crucial, and important business is conducted up and down the vertical hierarchy.
Superior-Subordinate Relationship	Peer-to-peer, manager-to-technical expert, Associate-to-associate, etc. relationships are used to conduct much of the salient business	This is the most important relationship; if kept healthy, success will follow. All important business is conducted through a pyramiding structure of superiors subordinates.

Phenomenon	Project Viewpoint	Functional Viewpoint
Organizational Objectives	Management of a project becomes a "joint venture" of many relatively independent organizations. Thus, the objective becomes multilateral.	Organizational objectives are sought by the parent unit (an assembly of suborganizations) working within its environment. The objective is unilateral.
Unity of Direction	The project manager manages across functional and organizational lines to accomplish a common inter-organizational objective.	The general manager acts as the one head for a group of activities having the same plan.
Parity of Authority & Responsibility	Considerable opportunity exists for the project manager's responsibility to exceed his authority. Support people are often responsible to other managers (functional) for pay, performance reports, promotions, etc.	Consistent with functional management; the integrity of the superior-subordinate relationship is maintained through functional authority and advisory staff services.
Time Duration	The Project (and hence the organization) is finite in duration	Tends to perpetuate itself to provide continuing facilitative support.

Source: David I. Cleland, "Understanding Project Authority Requires Study of Its Environment," Aerospace Management, Spring/Summer 1967, p. 10.

## SOME BASIC AUTHORITY RELATIONSHIPS

The nature of project authority, its sources, and the way it can be used often creates confusion for those interested in implementing the concept. Traditionally, the researchers on formal organization attest that authority is the means by which the objectives and tasks of the organization are accomplished. Also they maintain that authority is a basic individual and organizational mechanism for changing the behavior of certain participants within the organization. Accordingly, one researcher that discusses authority makes this comment:

Industrial organization structures seem to be designed with authority in mind. We build organizations in the shape of pyramids because that shape makes the exercise of authority easier. Pyramids create differences in rank and status, and people in the higher ranks can use their authority to influence lower ranks. Superiors in industrial organizations almost always naturally turn to authority whenever a change problem rests on the assumption that authority can help people who have more of it to change the behavior of those who have less of it.<sup>3</sup>

Leavitt observes that differences occur in the use of authority within the organizational structure--especially between the higher and lower levels of the organization. In

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<sup>3</sup>Harold J. Leavitt, Managerial Psychology, Chicago: University of Chicago Press, 1958, p. 141.

the hierarchy of the organization, one uses authority as an instrument in changing attitudes rather than actions, since those individuals in the hierarchy may have the power to retaliate against the use of restrictive authority. By contrast, in the lower organizational levels, authority often is employed in a more direct and openly restrictive method of controlling actions rather than attitudes.<sup>4</sup>

Sources of Authority (some traditional concepts)

Numerous discussions and differences of opinions are found in the literature regarding the nature and basis of authority. Weber states that, "Authority, the power of control which derives from an acknowledged status, enters in the office and not in the particular person who performs the office role."<sup>5</sup> Simons discusses the term authority of position in reference to the authority over rewards and sanctions of the office. He states further that, "the most important sanctions of managers over workers in industrial organizations are the (a) power to hire and fire, (b) power to promote and demote, and (c) incentives and rewards."<sup>6</sup> Regarding such sanctions, one writer predicts

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<sup>4</sup>Ibid., p. 153.

<sup>5</sup>"Perceptions of Organizational Authority: A Corporate Analysis," Administrative Science Quarterly, Ithaca: Cornell University Press, March, 1952, p. 468.

<sup>6</sup>Ibid., p. 469.

that the continued use of them eventually can weaken the superior's authority position.<sup>7</sup>

At this point it appears critical to distinguish between "formal authority" (legitimacy and position) and "functional authority" (based on technical competence and human relations skills). Table 2 illustrates a compilation of the conclusions of five organization researchers regarding both formal authority and functional authority. As seen in Table 2 formal authority is based on legitimacy and/or position - while functional authority finds its basis in an organizational participant's competence and/or in certain leadership or human relations skills possessed by the participant.

Definitions of each of these constructs are presented below:

Authority of legitimacy. This concerns the "right to command" and the "duty" of the participant's subordinates to obey.

Authority of position. Authority based on position comes with the office (position) and not necessarily to the "individual" performing a given organizational role.

Authority of competence. Organizational participants may develop an "authority" base in some cases by possessing experience and/or certain technical skills.

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<sup>7</sup>Ibid.

Table 2  
Sources of Authority

Source of Authority Constructs	Formal Authority Based on		Functional Authority Based on	
	Legitimacy	Position	Competence	Person
Weber	Legal		Rational Authority-technical knowledge, experience	Traditional authority — Charismatic authority
Urwick		Formal, Conferred by the organization	Technical implicit in special knowledge or skill	Personal conferred by seniority or popularity
Simon	Authority of legitimacy social approval	Authority of Sanctions	Authority of confidence (technical competence)	Techniques of persuasion (as distinct from authority)
Bennis		Role Incumbancy	Knowledge of performance criterion	Knowledge of the human aspect of administration
Presthus	Generalized deference toward authority	Formal Role or position	Technical expertise	Rapport with subordinates, ability to mediate individual needs

Source: "Perceptions of Organizational Authority: A Corporate Analysis," Administrative Science Quarterly, Ithaca: Cornell University Press, March, 1952, p. 467.

Authority of person. The authority of person is based primarily on the knowledge of the human aspect of administration." This type of authority is concerned with the "ability to mediate individual needs and the possession of certain leadership traits by a superior which enhances the frequency and extent of acceptance of formal authority on the part of the subordinate."<sup>8</sup>

#### Project Authority

From the above definitions of the four types of authority it seems realistic to assume that project authority emanates from each of these forms. The "right to command" or the "authority of legitimacy" may come from the "charter" given to the project manager to perform his role. However, this notion has generally been ignored in the literature.

Authority based on "position within the organization" may be utilized effectively. This type of authority depends, in part, on how other organizational participants view the role of the project manager. In some organizations much status may be given to project managers while in others project management may be given only limited status and organizational importance. Some organization researchers do not believe that "authority of legitimacy" and "authority of position" are unique types of

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<sup>8</sup>Ibid., pp. 468-9.

authority. Rather, they view the two as one form of authority.

The "competence" of the individual performing the role of project manager may be critical for his usage of authority. In our own investigations it was discovered that the mobility patterns of project managers frequently begin within research and development departments. The expertise they gain during their research and development exposure provides them with various technical skills. These skills provide them with background by which they can evaluate more effectively the recommendations of others. However, it is difficult to have "expertise" in a number of areas, consequently, the project manager must rely on the advice and recommendations of others. The evaluation and acceptance or rejection of this advice may be validated with "others" with whom the project manager has established alliances and working relationships.

The final type of authority, "authority of person," is based on administrative skills, especially those skills in human relations. Perhaps this type of "authority" is most important. Administrative skills are without question a chief ingredient for project success. The engineering problems associated with a project may be exceedingly complex and require a skillful administration. Further, the coordination of diverse manpower inputs require unique skills in human relations.

The nature of project authority appears to be related in



varying degrees to the preceding discussions on the "traditional" nature and bases of authority. Authority of the project manager is unique in that project organizations usually operate both vertically and horizontally within the host organization (the institutional structure). This apparent violation of the organization's chain-of-command and the scalar principle present some ambiguity regarding what constitutes project authority.

Most researchers on project management recognize the significance of authority to project management and discuss its significance in rather general terms. Middleton conducting one of the most extensive studies on project management in the aerospace industries concludes that the scope of the project manager's authority varies from project to project and varies within each company. He found that the following "models of project organization" frequently are found in the aerospace industry and that each generally is allocated different amounts of authority. The following gives the name and a brief description of each of the models:

1. Individual project organization

"All work on the project is accomplished in functional departments and no personnel, except for clerical help, report directly to the project manager."

2. Staff project organization

"It [the Staff project organization] includes a project manager plus a staff of control

functions such as program planning, financial control, contract administration, customer coordination, etc.... With a staff project organization, all of the primary functions for the project, such as engineering, procurement, manufacturing, etc., are accomplished within the boundaries of functional organizations. The project manager and his staff perform coordination and planning, and exercise control over functional organizations who work on the project."

3. Intermix project organization

"The Intermix approach...[occurs] when some of the primary functions for a given project, such as engineering, procurement, manufacturing, etc., are split off from functional organizations and assigned to report directly to the project manager along with staff functions. Some organization functions which cannot be split up economically. Therefore, the project manager exercises coordination, planning and project control over any remaining work done on the project by functional organizations outside the project organization."

4. Aggregate project organization

"All functions in the division or company, whether they are primary, support or control functions, are working on one and the same project.... In effect, it is a company organized along functional lines with only one project on which to perform work."<sup>9</sup>

Admittedly, it is difficult to make broad generalizations that apply to every case, however, Middleton's research

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<sup>9</sup>Charles J. Middleton, "Project Organizations in Aerospace Companies," (Unpublished Masters of Business Administration Thesis), Fort Worth, Texas: Texas Christian University, January, 1966, pp. 16-19.

notes that the amount of authority and responsibility for accomplishing a given task varies significantly among projects. Generally, the project manager operating under the individual project organization is given the responsibility for completing a project but not the direct authority over those functional areas performing the primary tasks on the project. When the staff project organization is utilized the amount of "authority" may vary significantly depending upon the conditions under which the project system is established. At one extreme, the staff organization may basically operate as a coordination mechanism for the primary functional areas. In such cases, Middleton notes that representatives of the various functional areas may be assigned to the project manager but that the amount of control over any functional area is limited. At the other extreme, the staff organizational approach may operate by having several individuals from each functional area under the direct control of the project manager.<sup>10</sup>

One criterion which appears important in determining the amount of control and authority the project manager has is whether or not he can assign specific tasks to the necessary functional areas of the company or whether he can transfer and mobilize the resources which are needed from various functional areas.<sup>11</sup>

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<sup>10</sup>Ibid., pp. 28-9.

<sup>11</sup>Ibid., p. 29.

Middleton's contributions to the literature on project management are significant because he addresses the question of project authority by various individual cases--not as some concrete collectivity.

#### The Authority-Influence Syndrome

In the different types of project organizations discussed above we may now ask how a project manager accomplishes his task objectives with varying degrees of authority. As previously noted, in the "individual" project organization the project manager must rely on his personal influence and leadership to "bargain and negotiate" with those in the different functional areas performing work on the project. Since the project manager has little or no authority he must establish working arrangements with those necessary for project success.

Project managers having little authority must learn to use his influence in such a way that he can use it repeatedly and effectively when the need to do so arises. The project manager desiring to use his influence must consider the situation involved, the nature of the task, his own strengths and weaknesses, and the behavior of those he is trying to influence. Several approaches for exerting influence are available to the project manager to achieve and maintain his own influence with other organizational participants.

### Building Alliances

When possible, the project manager will establish superior-subordinate relations with the managers above and below him. These alliances when effectively established will open channels for advancement, aid in building a loyal group of subordinates, and establish effective communication channels. Most project managers initially come from some functional area within the firm. His alliances and relationships with that group may greatly affect his ability to exert influence on other groups. For example, one frequently finds that a given functional area dominates an organization, i.e., engineering, when a project manager comes from such a function his propensity for exerting influence may be enhanced.

### Bargaining

In complex projects as in other more routine undertakings, disagreements frequently occur between the project manager and the others working on the project. The smart project manager learns to compromise with grace and still reach his objectives. Although they may appear significant to others on the project, these compromises may not really be significant changes in the objectives of the project manager.

### The Principle of Postponement

Frequently, the engineers and scientists working on a project may initiate requests for engineering changes or modifications. The project manager initially must weigh the cost of the change, the time involved in making the change, and how the proposed change will affect overall performance of the project. To turn down the request for a modification change may cause disagreements or affect the morale of the individual originating the change. Consequently, the project manager must carefully choose his alternative courses of action. He can "shelve" the request, he can send it through channels with his endorsements, or he can send it through channels but have the decision regarding its acceptance or rejection delayed. In most cases, it is important that the project manager should be taking some action regarding the suggested change. This will help keep him from becoming suspicious in the eyes of his subordinates or the project group.

Due to the basic nature of a project organization, every member of the group exerts influence on the other group members. In a project where all the participants are engineers or scientists the project manager must exercise special abilities to coordinate their activities. Specialists on the project group, by the knowledge they have, are depended upon to share and contribute that knowledge. By withholding their knowledge and expertise regarding some activity associated with the project,

they can exert considerable influence on the project manager.

In the other models of project organization, such as, the "staff project organization," the "intermix" organization, or the "aggregate project organization," one sees combinations of both project authority and influence being used. The more inclusive the "project charter" of the project manager, the greater the freedom the project manager has in using his authority and influence. In the "intermix project organization" we noted that some elements of the functional organization report directly to the project organization. In this case, the project's organization charter details the project manager's authority over the involved functional participants. The project manager may not be able to rely solely on authority, however, because of the participants involved from the functional areas.

Figure 2 presents a simplified schema illustrating the use of authority and influence by project managers operating under different models of project organization. It does not explain all the possible situations and circumstances involved in project management authority/influence relationships. Rather, it should be used for illustration purposes only.

From the relationships in Figure 2, it is seen that the project manager in the "individual" project organization generally would rely on his personal influence in managing the project.

Propensity to use Authority and Influence	Models of Project Organization			Aggregate Project Organiza- tion
	Individual Project Organiza- tion	Staff Project Organization	Intermix Project Organi- zation	
Authority	—	—	+	+
Influence	+	+	+	+

+ high propensity to use authority and/or influence.

— low propensity to use authority and/or influence.

FIGURE 2

MODELS OF PROJECT ORGANIZATION AND THE PROPENSITY  
TO USE AUTHORITY AND/OR INFLUENCE

Whether or not he would use authority would depend upon the nature and scope of his "charter" when he undertook the project. A similar pattern also would hold for the project manager operating in a "staff" project organization. In the "intermix" project organization and the "aggregate" project organization, one would expect to find that the project manager has greater flexibility in using both authority and influence.



Stewart presenting a broad approach to project authority notes that the "project manager's responsibility and authority are interfunctional, like that of top management for the company as a whole."<sup>12</sup> It seems evident that the validity of Stewart's statement again depends upon the particular project organization scheme that is employed. Cleland addressing the concept of authority notes that it is changing from "the bureaucratic hierarchical force to a participative and persuasive one."<sup>13</sup> He maintains that one must understand the organization and environment of project management before understanding the authority of the project manager. In essence, however, the authority of the project manager is best described by Cleland as follows:

A significant measure of the project manager's authority springs from his function and the style with which he performs it. The project manager's authority is neither all de jure (having specific legal foundation) nor all de facto (actual influence exercised and accepted in the environment). Rather, his authority is a combination of de jure and de facto factors in the total project environment....<sup>14</sup>

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<sup>12</sup> John M. Stewart, "Making Project Management Work," Business Horizons, Fall, 1965, p. 60.

<sup>13</sup> David I. Cleland, "Understanding Project Authority Requires Study of Its Environment," Aerospace Management, Spring/Summer, 1967, p. 7.

<sup>14</sup> Ibid., p. 8.

### SOME CONCLUDING REMARKS

This discussion has not attempted to discuss all the aspects of project authority and its source. Other insights will develop as more empirical research is undertaken. In the following paragraphs there are two areas that need additional investigation to further understand project authority. Each area should help delineate further the concept of project authority.

#### 1. Project Participation and Perception

Research needs to be conducted on how project managers, their subordinates, and their superiors view participation in a project undertaking. At one extreme, participants in a project may view the "experience" as a part of their development. Engineers desiring to move from an engineering-oriented position to a managerial position may view project experience as a necessary transitional phase in their career development. Likewise, the project manager's superiors may view this as a vehicle for organizational mobility and will place their "critical" subordinates in key project management positions. The astute superior that wants to shield a subordinate from undue risks may place or help select those projects for their subordinate where there is a high probability of project success.

By contrast, in some organizations participating in a

project may have a higher risk quotient for the participants. Without protection from such risks the project manager may be subjected to risk situations he has little control over. Consequently, his career may be endangered.

## 2. Vertical and Horizontal Communication Channels

Another area for further research is an analysis of who the project manager can communicate with in the other departments of the organization. It appears that the project manager's ability to communicate with others depends upon his understanding of the responsibilities of other functions; the alliances he has established with the personnel in these areas; and the "charter" and support he has been given in undertaking the project. His ability to communicate with various functional personnel may be critical to the success of the project. These communication channels not only entail peer groups but also top executives. For example, when disputes develop between the project manager and a line manager in function X what avenues does the project have for resolving the conflict? The alternatives open to him may dictate his bargaining position and strength. If the project manager has the "charter" to go directly to the peer's superior in function X then his bargaining position obviously is strengthened. However, if he must deal directly with that peer his bargaining position may be diminished. Likewise, if the project manager has recourse to

conflict resolution through his own superior he probably has a strengthened bargaining position in resolving conflict.

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